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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,956	12/20/2000	Hau Lee	DEM1P003	7270

7590 08/26/2004

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,956

Applicant(s)

LEE ET AL.

Examiner

Akiba K Robinson-Boyce

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WU

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Due to communications filed 12/20/00, the following is a non-final first office action. Claims 1-5 are pending in this application and have been examined on the merits.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of :

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful art" (i.e., the physical sciences) as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

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In the present case, claim 1 is directed to a method for creating a sales model for a plurality of products, Claim 1 recites the steps of "creating a plurality of demand groups...", "creating a sales model...", and "creating a market share model". These steps do produce a useful, concrete and tangible result, however, these steps represent mere ideas in the abstract since they do not include computer means or software embodied on a tangible medium to help perform the steps of this claim. Since no computer means or software embodied on a tangible medium do not exist, claim 1 and the claims that depends from it (claim 2) is found to be non-statutory.

In the present case, claim 3 is directed to an econometric engine for modeling sales as a function of price. Claim 3 recites "an imputed variable generator" and "a coefficient estimator coupled to the imputed variable generator, and wherein imputed variables generated by the variable generator are used by the coefficient estimator to create a sales model". However, these claims are directed towards software, which alone is not statutory. In order to be statutory, this software must be embodied on a tangible medium. Since no software embodied on a tangible medium exist, claim 3, and all claims that depend form it (claims 4 and 5) are non-statutory.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of claim 3 recites "...modeling sales as a function of price". However, the steps of the claim do not produce a model as a function of price. The claim is therefore indefinite since "...modeling sales as a function of price" is not further defined by the claim, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Because the term "...modeling sales as a function of price" is used and not further described, the entire claim and the scope of the invention unclear.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Chavez et al (US 6,684,193).

As per claim 3, Chavez et al discloses:

A imputed variable generator, (col. 8, lines 22-27, [consumption distribution imputed {inferred} from components]);

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A coefficient estimator coupled to the imputed variable generator, and wherein imputed variables generated by the variable generator are used by the coefficient estimator to create a sales model, [col. 15, lines 6-14, [revenue coefficient]]).

Chavez et al does not specifically disclose the terms "variable generator" or "coefficient estimator", however, does disclose an engine (col. 18, lines 23-27) that produces the same results, and therefore represents the econometric engine that contains the "variable generator" and the "coefficient estimator". Therefore, the "variable generator" and the "coefficient estimator" are inherent with Chavez et al.

As per claim 4, Chavez et al discloses:

Wherein the imputed variable generator receives raw data, cleans the data and generates imputed variables, (Col. 20, lines 24-32, [filtering and then identifying variables]).

As per claim 5, Chavez et al discloses:

Wherein the coefficient estimator creates the sales model by creating a sales model for a demand group and creating a market share model for a product in the demand group, (col. 7, lines 8-19, [model where a demand for products is expressed], Col. 13, lines 28-43, [creating a model that includes lost market share]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,078,893), and further in view of Garg, (US 6,044,357)

As per claim 1, Ouimet et al discloses:

Creating a plurality of demand groups, wherein each demand group is a set of at least one product, and wherein at least one of the demand groups is a set of at least two products, (col. 5, lines 45-64, [shows demand is described for each item in a given group where the product is represented by the item, in this case, one of the demand groups being a set of at least two products is inherent since Ouimet et al discloses that "each item in a given group" implies that there are more than one items in a group since the sales of "one" item can depend upon the parameters of all the other items]);

Creating a sales model for each demand group, (col. 6, lines 5-11, [shows a one-dimensional demand model which scales the amount of sales]);

Ouimet et al does not specifically disclose creating a market share model for each product in each demand group, however does disclose defining a new market model that represents and describes how the demand parameters are

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expected to vary, where the demand parameters relate to the products in each demand group in col. 6, lines 17-25.

However, Garg discloses:

creating a market share model for each product in each demand group, (col. 5, lines 38-41, [market share model to characterize the demand distribution for each brand, in this case the group is represented by the brand]). Garg discloses this limitation in an analogous art for the purpose of showing that market share models are used to set base stock levels for inventory management.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to create a market share model for each product in each demand group with the motivation of providing a representation of how the demand distribution is represented through products.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al (US 6,078,893) as applied to claim 1 above, and further in view of Garg, (US 6,044,357), and further in view of Chavez et al (US 6,684,193).

As per claim 2, both Ouimet et al and Garg fail to disclose collecting raw data; and generating imputed variables from the raw data, wherein the imputed variables are used to create the sales model, but Ouimet et al does disclose generating a sales model in Col. 6, lines 5-11.

However, Chavez et al discloses:

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collecting raw data; and generating imputed variables from the raw data, wherein the imputed variables are used to create the sales model, (Col. 20, lines 24-32, [filtering and then identifying variables]). Chavez et al discloses this limitation in an analogous art for the purpose of identifying variables that go furthest in “explaining” the uncertainty in the particular variable of interest.

It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to collect raw data; and generate imputed variables from the raw data, wherein the imputed variables are used to create the sales model with the motivation of producing a sales model with unused data.

Conclusion


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled “Box AF”], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled “PROPOSED” or “DRAFT”].

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
August 20, 2004


ROMAIN JEANTY
PRIMARY EXAMINER
Art Unit 3623